

CLAIMS:

1. A method of computing a biased ratio value for anisotropic texture map filtering, comprising:
  - receiving a ratio value for a texture map;
  - applying a bias to the ratio value to produce the biased ratio value; and
  - determining a number of texture samples to filter based on the biased ratio value.
2. The method of claim 1, wherein the applying comprises scaling the ratio value by the bias summed with one to produce the biased ratio value.
3. The method of claim 2, wherein the applying further comprises clamping the biased ratio value to a number less than or equal to one.
4. The method of claim 2, wherein the bias is programmed.
5. The method of claim 2, wherein the bias is determined by a software driver.
6. The method of claim 2, wherein the bias ranges from 0 to 15/16.
7. The method of claim 1, further comprising determining the bias based on a performance mode selected by a user.
8. The method of claim 1, further comprising performing trilinear filtering when the biased ratio value is greater than or equal to one.
9. The method of claim 1, further comprising performing anisotropic filtering when the biased ratio value is less than one.
10. A method of determining a number of texture samples for use in an anisotropic texture map filtering computation, comprising:
  - receiving a ratio value;
  - computing a biased ratio value using the ratio value and a bias; and
  - determining the number of texture samples for use in the anisotropic texture map filtering computation based on the biased ratio value.
11. The method of claim 10, wherein the bias corresponds to a texture identifier.
12. The method of claim 10, wherein the bias is programmed.
13. The method of claim 10, wherein the ratio value is scaled by the bias summed with 1 to produce the biased ratio value.

14. The method of claim 10, further comprising clamping the biased ratio value to one when the biased ratio value is greater than one.
15. The method of claim 10, wherein the computing comprises adding a level of detail bias to the level of detail value.
16. A programmable graphics processor for generating images using anisotropically filtered texture samples, comprising:
- a texture unit configured to receive texture parameters and compute a filtered texture sample, the texture unit including
    - an anisotropic optimization unit configured to compute a biased ratio value indicating a number of texture samples to anisotropically filter.
17. The programmable graphics processor of claim 16, further comprising an address computation unit configured to determine one or more read addresses using at least a portion of the texture parameters and the biased ratio value.
18. The programmable graphics processor of claim 17, further comprising a texture filter unit configured to receive one or more texture samples from memory and a portion of the texture parameters and produce an anisotropically filtered texture sample.
19. The programmable graphics processor of claim 16, wherein the anisotropic optimization unit includes a storage element configured to store one or more biases.
20. The programmable graphics processor of claim 16, wherein the anisotropic optimization unit includes a storage element configured as a lookup table.